Natural Killer cell in a nutshell

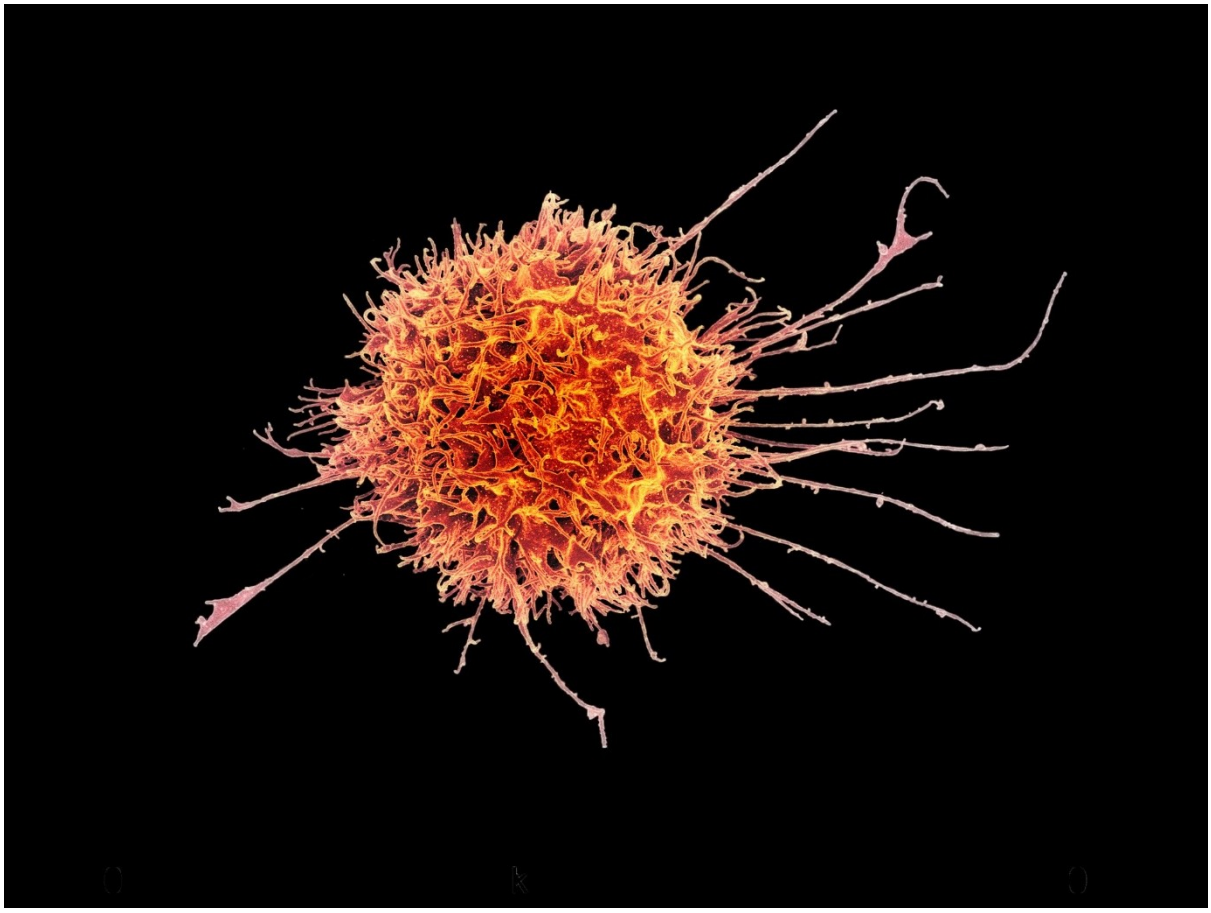
Natural Killer (NK) cells belong to group I Innate Lymphocytes (ILCs) and are responsible for a prompt response to a large variety of pathogenic microorganisms.

They originate from a common progenitor (descendant of stem cells which differentiates to create specialized cell types) as B and T cells and are effective killers of virally infected cells and control early signs of cancer. They are known for their 'natural' killing properties as priming or prior activation are not required for their activation (unlike in T cells for example).

Function: These immune cells can recognise and kill the cells of someone’s body that had been infected with a pathogen. Natural killer cells can also recognise and destroy tumour cells.

Disease: People who have deficient natural killer cells, usually because of an inherited immune disorder, may be more prone to certain viruses.

Location: Natural killer cells, or NK cells, are present in the blood and can move into other tissues to find targets.



Orange-coloured natural killer cell with abundant microvilli of various lengths protruding from the surface of the cell.

Image source: "Human Natural Killer Cell" Courtesy: National Institute of Allergy and Infectious Diseases (2016) , CC BY 2.0, https://flic.kr/p/LtPwto.

In this section you will learn more details about NK cell responses, their interaction with other immune cells and their importance in host protection.

To get started, on the next page, you will watch a micro-lecture in which Dr. Jessica Strid outlines details of the characteristics, function and reactivity of innate lymphoid cells, in particular the natural killer cells and how these cells are harnessed in immunotherapy.

Dr. Strid is a Reader in Cellular Immunology at Imperial College London.

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